

### Abstract

An improved theater geometry which is capable of providing improved image resolution and improved image contrast over prior systems is achieved with a unique projection geometry and image re-mapping technique. The projected image is provided with a continuously variable image resolution and brightness over the surface of a preferably dome-shaped screen which is to receive the image, concentrating the resolution and the brightness of the image within the central field-of-view of viewers that are unidirectionally seated in the theater, and sacrificing resolution and brightness toward the outside edges of the viewers' field-of-view. The result is a more efficient use of available projector resolution and brightness, an increase in the number of quality seats available in the theater, and an enhanced image contrast due to reductions in the light which is scattering from image elements to the rear of the screen.